

Results

- **Baseline characteristics**

The study recruited 69 intern dentists, whose ages ranged from 22 to 27 years, with a mean age of 23.72 ± 1.027 years. More than half of the participants were males (56.5%). All of them were residents of Alexandria. About two-thirds of participants were single (63.8%).

- **Participant flow (PRISMA flow diagram)**

Intern dentists who were working at the Faculty of Dentistry Alexandria University, Egypt.



Intern dentists who were working at the time of the study



Exclude intern dentists in vacation



Divide participants into 3 groups, 23 dentists each



Intervention (educational program for 3 weeks)



Measure the outcome: assess the knowledge and practice 2 and 4 months after finishing the educational program

- **Adverse events**

No adverse effects have been reported.

- **Outcome measures**

The data presented in Table 2 provides an overview of the overall knowledge score concerning eco-friendly dentistry among the intern dentists under study. The results demonstrate that prior to the implementation of the educational program, only 7.2% of the intern dentists possessed a commendable understanding of eco-friendly dental practices. Following the intervention, there was a significant improvement, with 72.5% of the intern dentists exhibiting good knowledge after two months of implementing the program. It is worth noting that during the four-month post-test, the participants maintained their high knowledge level, with 69.6% of intern dentists demonstrating good knowledge.

Table (1): Total knowledge score towards eco–friendly dentistry among the studied intern dentists before and after implementation of the educational program (Faculty of Dentistry Alexandria University, 2023).

Dentists' awareness and knowledge towards eco-friendly dentistry	Pre-intervention (n = 69)		After 2 months of the intervention (n = 69)		After 4 months of the intervention (n = 69)		Post hoc test		
	No.	%	No.	%	No.	%	p1	p2	p3
Overall knowledge							<0.001*	<0.001*	0.999
Poor knowledge (<50%)	29	42.0	1	1.4	5	7.2			
Fair knowledge (50-75%)	35	50.8	18	26.1	16	23.2			
Good knowledge (>75%)	5	7.2	50	72.5	48	69.6			
Total score									
Min – Max	0.0– 18		9 – 21		3 – 21				
Mean ± SD	11.01±3.63		17.57±2.44		16.89±3.41				
Median	11		18		18				

Fr: Friedman test, Significance between periods was done using Post Hoc Test (Dunn's)

F: F test (ANOVA) with repeated measures. Significance between periods was done using Post Hoc Test (adjusted Bonferroni)

p1: p-value for comparing between pre-intervention and after 2 months of the intervention.

p2: p-value for comparing between pre-intervention and after 4 months of the intervention.

p3: p-value for comparing between after 2 months of the intervention and after 4 months of the intervention.

* Statistically significant at $p < 0.001$

Table 3 illustrates how the educational program improved the intern dentists' eco-friendly practices. Before the program, only 21.7% of dentists achieved good scores in eco-friendly practices. However, after the program, these scores increased significantly ($p < 0.05$). Specifically, the percentage of dentists with good practices rose to 53.6% at two months and 46.4% at four months. The mean score percentage increased also from $59.18\% \pm 19.96\%$ to $68.16\% \pm 22.28\%$ and $68.24\% \pm 17.63\%$ after two and four months of the intervention, respectively.

Table (2): Total score of intern dentists' practices regarding eco-friendly dentistry before and after implementation of educational program (Faculty of Dentistry Alexandria University, 2023).

Dentists' practice towards eco-friendly dentistry	Pre-intervention (n = 69)		After 2 months of the intervention (n = 69)		After 4 months of the intervention (n = 69)		Post hoc test		
	No.	%	No.	%	No.	%	p1	p2	p3
Overall practice							0.028*	0.017*	0.999
Poor practice (<50%)	11	15.9	10	14.5	6	8.7			
Fair practice (50-75%)	43	62.4	22	31.9	31	44.9			
Good practice (>75%)	15	21.7	37	53.6	32	46.4			
Total score									
Min – Max	0.0 – 11		0.0 – 12		3 – 12				
Mean \pm SD	7.1 \pm 2.396		8.17 \pm 2.67		8.19 \pm 2.12				
Median	7		9		8				

Fr: Friedman test, Significance between periods was done using Post Hoc Test (Dunn's)

F: F test (ANOVA) with repeated measures. Significance between periods was done using Post Hoc Test (adjusted Bonferroni)

p1: p-value for comparing between pre-intervention and after 2 months of the intervention.

p2: p-value for comparing between pre-intervention and after 4 months of the intervention.

p3: p-value for comparing between after 2 months of the intervention and after 4 months of the intervention.

* Statistically significant at $p < 0.05$